

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: James H. Alleman

Filed: June 2, 1994

Serial No.: 08/252,984

Group Art Unit:

Docket: SL&amp;W 162.002US1

Examiner:

Title: INTERACTIVE TELEPHONE SYSTEM FOR OPTIMIZING SERVICE ECONOMY

DECLARATION UNDER 37 CFR § 1.131

Hon. Commissioner of  
Patents & Trademarks  
Washington, D.C. 20231

Dear Sir:

I, James H. Alleman, am a professor at the University of Colorado at Boulder teaching in the Interdisciplinary Telecommunications Program in the College of Engineering. I am also employed by Paragon Services International, Inc., the assignee of the above-identified patent application.

I am the sole inventor of the subject matter claimed in the above-identified US patent application serial no. 08/252,984, filed June 2, 1994, which is a File Wrapper Continuation of patent application serial no. 07/873,323, filed April 24, 1992.

I am submitting this declaration under 37 CFR § 1.131 to remove certain references from consideration which were cited by the Examiner as detailed below.

I have read and understood the office action mailed August 10, 1994, and the references cited therein and make this declaration in support of the patentability of the claims of the patent application serial no. 08/252,984.

This declaration made under 37 CFR § 1.131 is made in response to the rejections of the claims in the aforesaid office action under 35 USC § 103 based on the *Business Week*

## DECLARATION UNDER 37 CFR, SECTION 1.131

Page 2 of 5

Inventor: James H. Alleman  
Serial No: 08/252,984  
Filed: June 2, 1994

---

article dated April 13, 1992, entitled "Rome to Bonn via New Jersey" and the *Business Week* article dated December 2, 1991, entitled "How Overseas Callers Can Get State Side Rates".

Prior to December 2, 1991, the date of publication of the *Business Week* article entitled "How Overseas Callers Can Get State Side Rates", I conceived the above-identified and claimed invention. As factual evidence of this, the following facts are entered with supporting documentation.

Prior to December 2, 1991, I began developing and experimenting with a "stand-alone box" which was an early hardware implementation of a call-back system. This early system only allowed a caller to call into a dedicated telephone line and the "stand-alone box" answered the line and connected the caller to a second telephone line. I began testing the "stand-alone box" on or about January 29, 1989 with Mr. Theo Brenner located in Switzerland and with Mr. Fadi Ganhdour who was located in Jordan. Mr. Brenner and Mr. Ganhdour agreed to keep this experimental testing in confidence.

On or about April 29, 1990, design and development of a more advanced and computerized interactive telephone system for optimizing service economy was begun with the hiring of Mr. James Gunther of GTE, an engineer and software developer hired to implement my invention. As evidence of this development, attached hereto and incorporated by reference herein are the following Exhibits:

Exhibit A: Fax letter dated April 29, 1990 to Mr. James Gunther regarding the development effort.

Exhibit B: An Order, Authorization and Certificate from the Federal Communications Commission (FCC) adopted June 6, 1990, and released June 13, 1990, authorizing Paragon Systems International, Inc. to operate as an international resale carrier.

## DECLARATION UNDER 37 CFR, SECTION 1.131

Page 3 of 5

Inventor: James H. Alleman  
Serial No: 08/252,984  
Filed: June 2, 1994

Exhibit C: Letter dated June 27, 1990 to Mr. James Gunther regarding the development and specifications of the "router" portion of the design. This letter includes, as attachments, descriptions of the DID six line support functionality, the router functionality and the software functionality as it existed on that date.

On or about October 15, 1990, discussions began between myself and Call Interactive, a joint venture of AT&T and American Express Information Services Company. Call Interactive had the telephone infrastructure we desired as a platform for implementing the fully-functioning portion of this invention. This was a confidential relationship and Call Interactive was hired as a mere implementor of the present invention. As evidence of this, attached hereto and incorporated by reference herein is Exhibit D, a Confidential Disclosure Agreement between Paragon Services International, Inc. (the predecessor of the present assignee of interest) and myself in my capacity as CEO of Paragon Services International, Inc.

On April 25, 1991, the present invention was placed in public and commercial use using Call Interactive as the hardware and computer platform. See Exhibit E. Within one year of the initial operation of the present invention by Call Interactive, I filed the above identified patent application.

Between the time of initial software development of the computerized interactive telephone system for optimizing service economy by Mr. James Gunther in April of 1990, until the activation of the service provided by Call Interactive on April 25, 1991, some public, experimental use was conducted of the present invention. The present invention required overseas telephone experimentation to test the system functions over long distance international lines. For example, voice quality improvements when bridging international calls, the timing of signals, elimination of false signals to the computer, sizing of the telephone line circuits and the refinement of improper dialing procedures. This experimental

## DECLARATION UNDER 37 CFR, SECTION 1.131

Page 4 of 5

Inventor: James H. Alleman

Serial No: 08/252,984

Filed: June 2, 1994

period was termed "beta" testing as shown in the attached Exhibit F and in spite of optimistic predictions of its conclusion, the present invention continued to be non-functional well past the "live" operation date with Call Interactive.

As such, the present invention was not yet reduced to practice until it could be demonstrated to function properly. As evidence of this non-functioning and poor functioning, the following additional exhibits are entered:

Exhibit G: A memorandum from Kent Parkinson of Call Interactive to Tom Thompson and John Killion describing the subscriber file format for the system. The system was not yet fully operational and still required definition at this late date.

Exhibit H: A Letter to Mr. Theo Brunner dated December 16, 1991 indicating Paragon's attempts to correct failures indicated in Mr. Brunner's beta site operation.

Exhibit I: A letter to myself, James Alleman, from Gale Curtright dated April 2, 1992 describing the final functional operation of the hang-up detection circuitry.

Applicants have been diligent in bringing this invention to the attention of the United States Patent Office prior to December 2, 1991, to the filing date of the application on April 24, 1992. As evidence of this diligence, attached hereto and incorporated by reference herein as Exhibit J is a letter from John P. Halloway, the patent officer at the University of Colorado Foundation, Inc., dated March 29, 1991, receiving the disclosure of the present patent application to the University of Colorado Foundation, Inc. Thereafter, patent attorney Earl Hancock prepared and filed the present patent application in a diligent fashion.

It is respectfully submitted that the present patent application claims an invention which was conceived prior to December 2, 1991, with due diligence from prior to December

## DECLARATION UNDER 37 CFR, SECTION 1.131

Page 5 of 5

Inventor: James H. Alleman

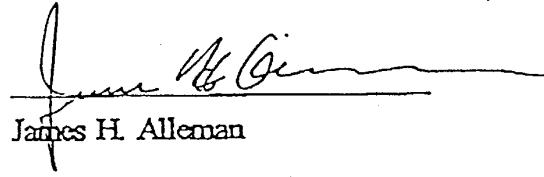
Serial No: 08/252,984

Filed: June 2, 1994

2, 1991, up to April 24, 1992, the filing date of the parent of the present patent application. Thus the *Business Week* article dated December 2, 1991, and the *Business Week* article dated April 13, 1992 should be removed as references under 35 USC, § 103.

I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true and further that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Respectfully submitted by

  
James H. Alleman

Dated

June 9 1994

FAX LETTER

July 5, 1990  
DATE: April 29, 1990

PLEASE DELIVER THE FOLLOWING TO: Mr. Jim Gunther

LOCATION: GTE Service Corporation

TEL NO: 214 718 5136

FAX NO: 214 718 4299

TRANSMISSION SENT BY:

NAME: JAMES ALLEMAN

LOCATION: Paragon Services International, Inc.

TEL NO: 402-554-2481

FAX NO: 402-554-3363

COMMENTS:

The following pages are the screens after various attempts at using the router software. The lines represent new attempts. I encounter problems on my home and PSI's lines, but they both have custom calling features, which may have interfered with the signalling. When I went to lines without custom calling the software worked much better, although it had some failures. I have attempted to document them on the print out.

One minor point, in the call back mode, the voice response does not occur for about 6 or 7 seconds. This seems too long - two to three might be better. On the other hand, when I hit star to terminate a call, I hear the voice response right away. The timing on this is perfect.

I will attempt to connect Jordan after your evaluation of these problems.

Regards,

Jim

COVER PAGE + 3 PAGE(S)  
IF ANY PROBLEMS WITH TRANSMISSION, CALL 402 554 2647

EXHIBIT

A

Before the  
Federal Communications Commission  
Washington, D.C. 20554

In the Matter of

PARAGON SYSTEMS  
INTERNATIONAL, INC.

File No. I-T-C-90-074

Application for authority to operate  
as an international resale carrier.

ORDER, AUTHORIZATION AND CERTIFICATE

Adopted: June 6, 1990; Released: June 13, 1990

By the Chief, International Facilities Division

1. The above-captioned application, filed on March 13, 1990 by Paragon Systems International, Inc. (PSI), requests authority pursuant to Section 214 of the Communications Act of 1934, as amended, to resell the switched message telephone services of existing common carriers to provide international switched voice service between the U.S. and various overseas points. The application was placed on public notice on March 21, 1990. No comments were received.

2. The applicant is a start-up company which proposes to resell international switched voice services in competition with other common carriers already providing resale of such services. PSI has filed information required by Section 63.01 of the Commission's Rules. In authorizations of new entrants over the past decade, the Commission has recognized that increased competition in international markets is beneficial.<sup>1</sup> We find that the market will support additional carriers and that the added competition will be in the public interest.<sup>2</sup>

3. For the foregoing reasons, IT IS CERTIFIED that the present and future public convenience and necessity require the provision of international switched voice services to the general public by PSI.

4. Accordingly, IT IS ORDERED that application File No. I-T-C-90-074, IS GRANTED, and PSI is authorized to provide international switched voice services by the resale of the international switched voice services set forth in AT&T's Tariff F.C.C. No. 1 and 2, MCI's Tariff F.C.C. No. 1, US Sprint's Tariffs F.C.C. Nos. 1 and 2 and Allnet's Tariff F.C.C. No. 1, between the United States and the points listed in those tariffs.

5. Copies of any operating agreements entered into between the applicant and its correspondents shall be filed with the Commission within 30 days of their execution.

6. IT IS FURTHER ORDERED that the applicant shall file a tariff pursuant to Section 203 of the Communications Act, 47 U.S.C. Section 203, and Part 61 of the Commission's Rules, 47 C.F.R. Part 61, for the services authorized in this Order.

7. IT IS FURTHER ORDERED that the applicant shall file the annual reports of overseas telecommunications traffic required by Section 43.61 of the Commission's Rules, 47 C.F.R. §43.61 (October 1, 1989).

8. This order is issued under Section 0.291 of the Commission's Rules and is effective upon release. Petitions for reconsideration under Section 1.106 or applications for review under Section 1.115 of the Commission's Rules may be filed within 30 days of public notice of this order (see Section 1.4(b)(2)).

FEDERAL COMMUNICATIONS COMMISSION

George S. Li  
Chief, International Facilities Division  
Common Carrier Bureau

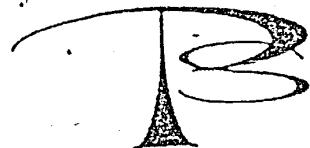
FOOTNOTES

<sup>1</sup> See, e.g., the cases cited in the Telitec Saving Communications Co., File No. I-T-C-85-062, Memo No. 3548, (released April 3, 1986) at n.2.

<sup>2</sup> FCC v. RCA Communications, Inc., 346 U.S. 85 (1953); Mackay Radio and Telegraph Co., 28 FCC 231 (1960).

EXHIBIT

B



PARAGON SERVICES INTERNATIONAL, INC.

405 SOUTH SIXTEENTH STREET • SUITE 1401 • OMAHA, NE 68102

• 1 402 345-0181

June 27, 1990

Jim Gunther  
GTE  
4500 Fuller Drive, F03A25  
Irving, Texas 75015-2092

Dear Jim,

The attached note gives more specifications on "the router" and the functionality it should have. Thus far, it seems to work fine on calling back and on the cross connect. The release of the second line, however, is sometimes a problem. It may only be on the two lines I am using, which have custom calling features. I will continue to monitor this on outside calls. I think there is a function that allows the system to hang up.

In addition, I am enclosing my versions of PKARC and PKXARC and Procom, although your system seems to handle the transfer quite adequately. We now need to move forward on the DID software: I have written this up as a separate section.

Things are moving forward quickly.

Warm regards,

  
Jim

JA/gh

Attachments

P.S. I've also included an earlier software write-up. Most of this seems to be in your program already.

✓ disk was sent

EXHIBIT

C

### DID's 6 line support Functionality

The DID software should initially support 1 DID trunk, terminating in one of the D4x boards. Twenty (20) to one-hundred (100) Did numbers should be handled.

Then, the phone list (phone.lst) would provide the support for this number of DID's. Initially, PSI will have six (6) lines in service, outgoing. (They are 342-5206, 341-0198, 345-0294, 342-5228, 341-0173 and 345-0181). The last two numbers are the last ones the program should call--they are the ones I use at home.

This will allow the test of the system with several customers and estimate the need for T1 carriers and get a better sense of the demands on the system.

### The Router Functionality

In addition to the call back and connection features, the router should have a variety of functionalities that the software currently does not provide.

- 1) Automatic redial on the first call if a failure occurs. The 3rd or 4th attempt should be on an ATT override, i.e. 10288 followed by the appropriate digits.
- 2) Pressing the star twice (\*\*) should disconnect the current call and allow the user to make another call. (This avoids an accidental disconnect.)
- 3) A voice warning to the user that too many or too few digits have been dialed or if a time-out occurs.
- 4) A warning to the user that the time-out is about to occur and will terminate the call. The user could start over by pressing star twice (\*\*).
- 5) The search to find the first open pair to return calls (Is this functionality already there?).

More items can be added to this list, but these are the priorities.

### Long Term Considerations

#### Proposed Additional Functionality of the Router Software and Hardware.

In addition, the Router software and hardware should be capable of handling fax services, providing electronic mail boxes and storing forward mail boxes and Telex services via the PSI network. This would be quite useful to individuals here in different time zones.

### Software Functionality

1. Recognize the existence of an incoming call to a specific line or DID number.
2. Determine if it rings more than one time. If so, begin the initiation of a call to the identified caller.
3. If the call rings longer than five (5) rings, terminate the call initiated in 2, above.
4. Determine if the call initiated in 2 above is ringing at the destination, trunk busy or "cannot call at this time."
5. Re-initiate the call if it is not ringing at the destination and continue to re-initiate the call until it rings at the destination (i.e. repeat 4) or until fifteen minutes has passed.
6. Listen for an answer to the call. Upon detection of answer, give voice response "Please dial now and terminate with \*".
7. Listen for digits dialed and \*. Have a time-out function if no digits are dialed in two (2) minutes or no activity on line.
8. Listen for action on line and \*\*.
9. Upon detection of \*\* sign, offer voice response to initiate the next call.
10. Repeat 7, 8, and 9 until on hook or \*\* sign is detected. (Time-out function of 7 is fall back.)
11. If on line detected, hang up and prepare for next calls.
12. Match caller (on first line) and calls on second line i.e. callers I.D., time of day, date, the number(s) called, and minutes called.
13. Off load data captured in 12 at specified intervals: use one (1) hour initially.

# CALL INTERACTIVE

A joint venture of American Express Information Services Corporation and AT&T.

HEADQUARTERS OFFICE:  
2301 North 117th Avenue  
Omaha, NE 68164  
Tel: (402) 498-7000 Fax: (402) 498-7900

October 15, 1990

Schwegman, Lundberg &  
Woessner, P.A.

SEP 06 1994

RECEIVED

Mr. James Alleman  
Acting CEO  
Paragon Services International, Inc.  
405 South 16th Street, Suite 1401  
Omaha, NE 68102-2614

Dear Jim:

In connection with a prospective business relationship between Call Interactive and Paragon, our discussions will involve information which Call Interactive or Paragon considers confidential, proprietary and/or sensitive ("CONFIDENTIAL INFORMATION").

Each of Call Interactive and Paragon agrees to keep confidential and to use solely for purposes of these discussion and related presentation material of October 15, 1990, any Confidential Information provided to it by the other (the "Providing Party") in connection with these discussions including PSI's Business Plan, slides and related material used in PSI's presentation of October 15, 1990. As used herein, "Confidential Information" shall mean any non-public, confidential proprietary information provided by the Providing Party to the other (the "Receiving Party") relating to this Agreement, the services to be rendered hereunder or the transactions contemplated hereby, including without limitation, pricing and material terms and conditions of these discussions and any Supplement, intellectual property, enabling software, programming and the computer based interactive system developed by Call Interactive (the "System"), except that Confidential Information does not include any information that

- (i) is required by law to be disclosed;
- (ii) that is provided orally, unless prior to the communication of such information, the Receiving Party is advised that it is non-public, proprietary and confidential and has agreed to accept such information, and within 30 days after the day on which first communicated it is designated as Confidential Information in writing by the Providing party (and the parties agree in writing that such writing accurately represents the previous oral disclosure);
- (iii) was available to the Receiving Party, or its directors, agents, employees or representative, prior to its disclosure to the Receiving Party by the Providing Party;

AT&T

AMERICAN EXPRESS  
INFORMATION  
SERVICES



EXHIBIT

D

- (iv) was known or becomes generally available to the public or to competitors of the parties hereto other than as a result of disclosure by the Receiving Party;
- (v) becomes available to the Receiving Party, or its directors, agents, employees or representatives, from a source other than the Providing Party or its representatives which source was not subject to any non-disclosure obligations to the providing Party with respect to such information;
- (vi) was independently developed (and substantiated in writing as such) by the Receiving Party.

Subject to (ii) above, any Confidential Information furnished by the Providing Party must be in written and/or other tangible form, will be identified to the Receiving Party at the time of its disclosure and will be clearly marked with a legend which indicates its confidential and proprietary nature. Each of the parties hereto agrees that the Confidential Information will not be used by it in any way other than in connection with these discussions, and that Confidential Information will be kept confidential by such party and its employees and authorized representatives (to whom such Confidential Information may be disclosed only on a need-to-know basis), and shall not, except as hereinafter provided, be disclosed by such party or its directors, agents, employees or representative without the written consent of the other party. Each of Call Interactive and Paragon agrees that Confidential Information may be disclosed without the written consent of the other party on a need-to-know basis but confidential to the common carrier or billing series is replaced by "services" provider in connection with the approvals required by the them in connection with a program of Paragon.

In the event that Paragon Call or Interactive is requested or required by government compulsion (by oral questions, interrogatories, requests for information or document, subpoena, civil investigative demand or similar process) to disclose any Confidential Information, such party agrees to provide prompt notice to the providing party so that the Providing Party may seek a protective order to take other appropriate action. It is further agreed that in, in the absence of a protective order or the receipt of a waiver hereunder, the Receiving party is nonetheless, in the opinion of its counsel, compelled to disclose the Confidential Information to any tribunal or in any proceeding or else stand liable for contempt or suffer other censure or penalty, the Receiving party may disclose such Confidential Information to such tribunal or in such proceeding without liability hereunder but will take all step to assist the providing Party in obtaining confidential treatment thereof.

All Confidential Information shall remain the property of the Providing Party and not be used by the receiving party in any manner what so ever without prior written consent of the providing party. Confidential information shall be returned to the Providing Party upon its request or upon the Receiving Party's determination that it no longer has a need for such Confidential Information.

Each of Call Interactive and Paragon agrees that if there is a breach of threatened breach of this Agreement, money damages would not be sufficient remedy, and that the providing party shall be entitled to appropriate injunctive or other equitable relief as a remedy for any such breach or threatened breach.

Nothing herein shall be construed as prohibiting the Providing Party from pursuing any other remedies for such breach or threatened breach.

This agreement shall be governed by the laws of the State of New York, without regard to conflicts of laws principles.

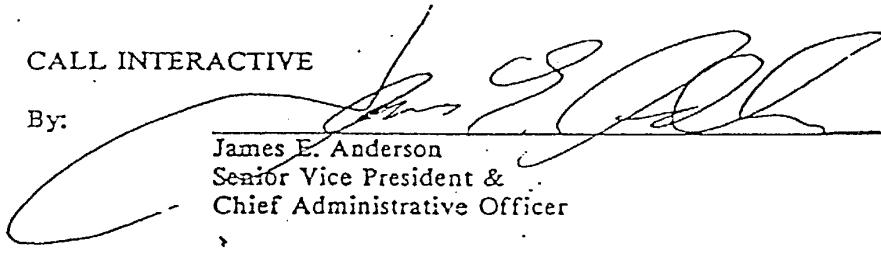
This agreement may only be amended in writing by both parties.

Please acknowledge your agreement with the foregoing by signing a copy of this letter in the space provided and returning it to the undersigned.

We look forward to working with you toward a mutually beneficial relationship.

Very truly yours,

CALL INTERACTIVE

By: 

James E. Anderson  
Senior Vice President &  
Chief Administrative Officer

Accepted and Agreed to:

By: 

James Allerman  
Acting CEO

CII

# CALL/INTERACTIVE

A joint venture of American Express Information Services Corporation and AT&T.

HEADQUARTERS OFFICE:  
2301 North 117th Avenue  
Omaha, NE 68164  
Tel: (402) 498-7000 Fax: (402) 498-7935

March 6, 1991

James E. Anderson  
Senior Vice President and  
Chief Administrative Officer

Jim Alleman  
Paragon Services  
International, Inc.  
405 South 16th., Suite 1401  
Omaha, NE 68102-2614

Dear Jim:

We are very pleased that negotiations have been successfully completed between our two companies. We look forward to a long and rewarding relationship.

Our technical team is moving ahead full speed with the development of the service and we appear to be on schedule for our turn-up on April 25, 1991.

Again, welcome to Call Interactive.

Sincerely,



James E. Anderson  
Sr. Vice President/  
Chief Administrative Officer

JEA/jh



EXHIBIT

E

OCT 29 '94 14:20

PARAGON SERVICES, INC.

CO 100

Paragon Services International, Inc.  
405 South 16th., Suite 1401  
Omaha, NE 68102-2614  
USA

PRESS RELEASE

FOR IMMEDIATE RELEASE

January 10, 1991

**PARAGON SERVICES INTERNATIONAL UPGRADES TO NEW SYSTEM FOR  
DISCOUNTED INTERNATIONAL VOICE TELEPHONY SERVICE**

Paragon Services International, Inc. has developed and implemented a new system to supply discounted international voice telephony service.

Paragon Services International, Inc. is engaged in the resale of telephone service, principally to international points, and has developed the hardware and software driven "proprietary router" which allows for the resale of international telephone service at rates twenty to fifty percent below standard international tariff charges.

Dr. James Alleman, Chairman of Paragon Services International, Inc., stated, "While our international customers currently enjoy the best international voice telephone rates in their respective countries, the new system will significantly improve the quality, reliability and speed of connection for PSI's customers."

The system has been in "beta" testing since October 1990 and is now fully operational. In addition to the discounted international voice traffic, PSI offers detailed billing and other enhancements not usually available from foreign national providers. PSI rates for service in Greece, shown on the overleaf, are illustrative of the savings one can achieve with this service. Equivalent savings can be realized in many other markets as well.

For additional information contact:

Gloria Patchen-Houston or Michael Shonka  
Paragon Services International, Inc. at 402 345 0181

pr\_0

EXHIBIT

F

for Ultimus

MEMORANDUM

March 27, 1991

Important File

(1)

To: Tom Thompson  
John Killion  
  
From: Kent Parkison  
  
Subject: Subscriber Floppy Disk File

cc: Vince Marco

The following is a description of the subscriber file we will be using in building the Paragon data base. I have listed the limitations of the current system so everyone will have an understanding of what is required for input.

#### Subscriber File Layout

~~DID <sub\_name> Country Code, Phone #; {client\_id}; <start>; <stop>; {PIN}; {DEMO}; {SPARE}; };~~

Information not delimited by a <> or a {} is required information. Information contained in <> will not be used by the ARU software and will be stripped out. Information contained in {} is optionally included. ~~Note the placement of information inside commas is very important.~~

#### Other Data Checks

The following are additional data checks that will be made on the lengths of fields in the Subscriber file.

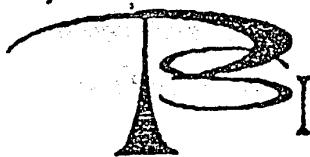
DID	Must be four characters.
Country Code	Must be between one to four characters.
Phone #	This field plus the Country Code must be less than or equal to thirty characters. NOTE: For domestic calls this should include the area code.
Client Id	If present must be less than six characters.
PIN	If present must be five characters.
DEMO	If present must be single "n" or "y" character.
SPARE	Future use.

Call Interactive - Proprietary and Confidential

EXHIBIT

G

Paragon Services International, Inc.



Mr. Theo E. Branner, President  
Franklin College Switzerland  
Via Ponta Tresa 29  
6924 Sorengo (Lugano)  
Switzerland

December 18, 1991

Dear Theo:

This is a belated response to your November 20, 1991 facsimile to Jim Alleman.

We certainly appreciate your payments on account.

Enclosed are October PSI invoices including post-facto corrections which make our rates competitive with the Swiss PTT rates to the USA. In addition these new rates were used to re-calculate your office and home calls for the period April 25th through September 30th and provided a credit adjustment.

We feel the revised rates are directly competitive with the AT&T USA Direct tariff. AT&T's printed rate is \$1.87 (USA \$) for the initial minute and \$1.09 for each additional minute plus a \$2.50 Service Charge to each Calling Card billed call. Using the PSI network an example rate for a five (5) minute, Switzerland-to-USA call, at your 1pm-7pm time, will now cost only an average of \$1.20 (USA \$) per minute...a savings of over 20% versus the PTT rate. Similarly, an example PSI five (5) minute call at your 7pm-Midnight time will average \$1.08 per minute (still a savings over the PTT charges).

It has taken until Monday of this week to track the "trouble" incident you experienced from your home the evening of November 21st. Our service vendor finally reported their records do indicate the "attempts" you made to activate a callback to your number. Unfortunately it seems there was an "all AT&T circuits busy" condition each time you tried the service during approximately a one hour period. Everything was dialed correctly, merely a circuit busy condition over which we have no control.

We are always concerned about call progress difficulties. As a suggestion, if you incur any trouble condition, please do not hesitate to dial our 24-hour, PSI Trouble Reporting Number, 1-402-498-7700. Often the trouble desk is able to immediately take action to trace the difficulty and provide a remedy.

Happy Holidays!

Sincerely,

*Gale H. Curtright*  
Gale H. Curtright  
Director of Operations  
402-478-6885

Enclosures:

Paragon Services International, Inc. - Lincoln Operations Office - 1701 South 17th Street, Lincoln, Nebraska 68502 - USA

EXHIBIT

H

OCT-27-'94 THU 10:45 INTELICOM PROPS/CO TEL NO. 303-442-9125  
Paragon SRVCS INTL. TE 402-476-5885

T B Paragon Services International, Inc.

FACSIMILE CORRESPONDENCE - 303-442-9125

April 2, 1992

Mr. Jim Alleman, CEO  
Paragon Services International, Inc.  
4840 Riverbend Road, Suite 4  
Boulder, Colorado 80301

Dear Jim:

The Prairie Systems PSI Callback US System is operational.

There are three (3) important changes to the dialing instructions. They are:

1) Each account now has a NEW Personal Access Number:

<u>Old Access Number</u>	<u>Account Name</u>	<u>NEW ACCESS NUMBER</u>	<u>CallBack Number</u>
4100	Jim Alleman PSI Ofc	402-398-4380	303-443-4260
4147	Barbara Miller Ofc	402-398-4382	202-647-0597

2) When you call your "Personal Access Number" you will hear a continuous tone (instead of ringing). When you hear the tone, hang up the receiver and wait for the callback.

3) After connection to the PSI network, to call within the USA it is necessary to dial "01" before the Area Code and Telephone Number.

Enclosed is a page of "Revised Dialing Instructions". Because we are now served by improved switching equipment, it is no longer necessary to terminate a call by pressing the star button twice (\* \*). We have full network supervision to detect proper hang-up.

At this time Prairie Systems is unable to provide a Travel Call/Demo number process to allow the user to enter the current telephone number for callback. Thompson indicates he can work this in later on. It maybe they haven't even got this feature for the competition - or - are concerned we would want to operate this feature in the USA on an 800# which might stress their contract with others.

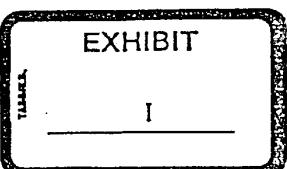
Remember the abbreviated cost for a USA-to-USA domestic call (via callback) is approximately \$0.12 for the front haul, plus CPU and backhaul minutes @ \$0.225 first minute and \$0.32 each additional minute. Thus (after the first minute) PSI's costs are at least \$0.44 each additional minute. O.K. for demos...poor for domestic calling.

Will you please advise Barbara about her Access Number.

Sincerely,

  
Gale Curtright  
Director of Operations

Enclosure: (1)



CU University of Colorado Foundation, Inc.

Foundation Center  
1205 Larimer Street  
P.O. Box 3000  
Denver, Colorado 80204  
(303) 296-1111

March 29, 1991

Dr. James Alleman  
Paragon Services International, Inc. (PSI, Inc.)  
405 S. 16th St., Suite 1401  
Omaha, NE 68102

RE: System for Telecommunication Marketing

Dear Jim:

This will verify our conversations on March 21 concerning the protection and licensing of the above referenced invention disclosure which you discovered and reduced to practice on your own time and through the efforts of PSI, Inc., a company basically owned by you.

You have advised that you will join the University as a member of its faculty in August as an Associate Professor in the Interdisciplinary Telecommunications program where you anticipate further work will be done on your discovery. You would like the University and your department to participate in the fruits of commercial exploitation, but believe that the existing royalty sharing formula would not be entirely fair to you because of your earlier inventorship and development.

I agree and upon your formal disclosure of the invention to me, I would be willing to seek protection and licensing at Foundation expense. If it is commercially exploited, I would seek to fully reimburse the Foundation for its out-of-pocket patenting and licensing expenses, and I would distribute the remainder 50% to PSI, Inc. with the other 50% being divided in thirds between your research account, your department, and the remaining one-third to the Foundation/University.

If this meets with your approval please signify below and return this letter to me, retaining a copy for your file. The disclosure form which I gave you should be sent to me but please feel at liberty to communicate directly with Earl C. Hancock, Esq., who the Foundation will retain in this matter.

Sincerely,

*John P. Holloway*  
John P. Holloway  
Patent Officer

I accept and approve of this distribution specified above.

PARAGON SERVICES  
INTERNATIONAL, INC.

By: *E.C.*

James Alleman, Ph.D.  
for the company and on behalf of himself

JPH/pmb

cc: Earl C. Hancock, Esq.

EXHIBIT

S/N 08/252,984

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: James H. Alleman

Filed: June 2, 1994

Serial No.: 08/252,984

Group Art Unit: 2601

Docket: SLW 162.002US1

Examiner: A. Matar

Title: INTERACTIVE TELEPHONE SYSTEM FOR OPTIMIZING SERVICE ECONOMY

---

AMENDMENT AND RESPONSE

Hon. Commissioner of  
Patents & Trademarks  
Washington, D.C. 20231

Dear Sir:

In response to the Office Action mailed August 10, 1994, please admit the following remarks in response to the rejections without amendment to the claims.

In the Claims

Please amend claims 18, 19, 21, 23-25 as follows:

18. [Once Amended] A system for establishing a telephone communication link between a subscriber telephone station and a destination telephone station, both being connected through a telephone exchange, comprising:

control means operable for managing a database of caller information [including a caller response unit];

storage means connected to the control means and operable for storing the database of caller information including a preassigned [a local] direct inward dial telephone number

James H. Alleman  
Serial No: 08/252,984  
Filed: June 2, 1994

---

associated with a subscriber and [for storing] a subscriber [remote] telephone number  
associated with the subscriber telephone station;

first telephone connection means connected to the control means and operable for  
connecting [to a] through a trunk line to the telephone exchange and for receiving an  
incoming direct inward dial telephone number on the trunk line from the telephone exchange  
as part of an incoming call attempt from the subscriber telephone station, the incoming direct  
inward dial telephone number indicating the number called by the subscriber;

second telephone connection means connected to the control means and operable for  
dialing out through the telephone exchange;

the control means further operable for comparing the incoming direct inward dial  
telephone number to the preassigned [local] direct inward dial telephone number and, if the  
incoming direct inward dial telephone number matches the preassigned [local] direct inward  
dial telephone number associated with the subscriber, the control means is further operable  
for:

calling the subscriber remote telephone number through the first telephone  
connection means after the subscriber terminates the incoming call attempt and  
connecting to the subscriber telephone station;

receiving from the subscriber a calling telephone number for the destination  
station;

calling the calling telephone number through the second telephone connection means; and for

bridging the first telephone connection means to the second telephone connection means so that the subscriber is connected to the destination.

19. [Once Amended] The system according to claim 18 wherein the control means is further operable for indicating an invalid call attempt if the incoming call attempt does not terminate within a [the] predetermined period of time.

21. [Once Amended] The system according to claim 18 wherein the control means is further operable for indicating an invalid call attempt if the incoming direct inward dial telephone number does not match the preassigned [local] direct inward dial telephone number associated with the subscriber.

23. [Once Amended] A method establishing a telephone communication link between a subscriber telephone station and a destination telephone station, both being connected through a telephone exchange, comprising the steps of:

storing a preassigned [local] direct inward dial telephone number associated with a subscriber;

AMENDMENT AND RESPONSE

Page 4 of 9

James H. Alleman  
Serial No: 08/252,984  
Filed: June 2, 1994

---

storing a subscriber remote telephone number associated with the subscriber telephone station;

receiving an incoming direct inward dial telephone number from a first telephone exchange connection as part of an incoming call attempt from the subscriber telephone station;

comparing the incoming direct inward dial telephone number to the preassigned [local] direct inward dial telephone number and if the incoming direct inward dial telephone number matches the preassigned [local] direct inward dial telephone number associated with the subscriber, performing the following steps:

calling the subscriber remote telephone number after the subscriber terminates the call attempt and connecting to the subscriber telephone station;

receiving from the subscriber a calling telephone number for the destination station;

calling the calling telephone number through a second telephone exchange connection; and

bridging the first telephone exchange connection to the second telephone exchange connection so that the subscriber is connected to the destination.

24. [Once Amended] The method according to claim 23 further comprising the steps of comparing the incoming direct inward dial telephone number to the preassigned [local] direct inward dial telephone number and if the incoming direct inward dial telephone number does not match the preassigned [local] direct inward dial telephone number associated with the subscriber, terminating the incoming call attempt.

25. [Once Amended] The method according to claim 23 further comprising the steps of comparing the incoming direct inward dial telephone number to the preassigned [local] direct inward dial telephone number and if the incoming direct inward dial telephone number does not match the preassigned [local] direct inward dial telephone number associated with the subscriber, answering the incoming call attempt and playing a prerecorded message.

REMARKS

In response to the Office Action mailed August 10, 1994, claims 18, 19, 21, 23-25 have been amended. Applicant offers the following remarks in support of the amendments and in response to the Examiner's remarks.

Examiner Interview Summary

Applicant had requested a Telephone Interview preliminary to the issuance first office action to discuss the case with the Examiner. The intent of an Interview Preliminary to

AMENDMENT AND RESPONSE

Page 6 of 9

James H. Alleman  
Serial No: 08/252,984  
Filed: June 2, 1994

---

the first office action was to clear up any minor problems in the case in an efficient manner and to accelerate ex parte prosecution.

Applicant thanks Examiner Matar for the courtesy of calling the undersigned attorney and granting the telephone interview on August 3, 1994. Examiner Matar called Applicant's attorney before reviewing the new claims and stated the there was nothing new to discuss and therefore a telephone interview was unnecessary. Applicant's attorney requested that Examiner Matar call him after reviewing the new claims if there were any issues that could be resolved by telephone before issuance of the first office action.

Rejection of the Claims Under 35 U.S.C. § 112

Claims 18 through 27 were rejected by the Examiner under 35 U.S.C § 112 second paragraph, for being indefinite. The Examiner raised questions about the order of operation of some of the functions of the apparatus claims and the steps of the method claims. Applicant has added clarifying language throughout the claims to clarify the operation of the claims invention. Applicant respectfully requests reconsideration of the rejected claims, removal of the rejections and allowance of all claims.

Removal of the Business Week Article from Consideration

Claims 1 and 18-27 were rejected under 35 USC §103 as being unpatentable over the IDT machine disclosed in *Business Week* articles and a portion of the applicants own

AMENDMENT AND RESPONSE

James H. Alleman  
Serial No: 08/252,984  
Filed: June 2, 1994

Page 7 of 9

specification. Applicant respectfully submits the attached Declaration of James H. Alleman, inventor of the present invention to which this patent application applies, swearing behind the *Business Week* articles.

Since the *Business Week* Articles are not prior art to the present claimed invention, the rejection of claims 1 and 18-27 under 35 U.S.C. § 103 fails. Applicant respectfully requests reconsideration of the rejected claims, removal of the rejections and allowance of all claims.

REJECTION OF THE CLAIMS UNDER 35 USC §103

Claims 1 and 18-27 were rejected under 35 USC §103 as being unpatentable over Kahn et al. (US Patent No. 4,086,438) in view of Billinger et al. (US Patent No. 4,769,834) and in further view of Srinivasan (US Patent No. 5,185,782).

Applicant respectfully points out that the present invention is quite different from the Kahn et al. patent. The present invention as claimed does not use stored security codes. Identification of the user is based upon which DID number was dialed and which DID number is sent along the trunk line. Also, the present invention does not answer the call but expects the subscriber to hang up (call attempt) so no connection charges are incurred.

On page 6, first full paragraph, of the Office action, the Examiner described the differences between the present invention and the Kahn et al. patent. The Examiner stated that "the claimed invention utilizes information provided by the exchange to identify the

AMENDMENT AND RESPONSE

Page 8 of 9

James H. Alleman  
Serial No: 08/252,984  
Filed: June 2, 1994

---

originating station (such as DID and ANI)." After this characterization the Examiner combines the Billinger et al. patent and the Srinivasan patents with the Kahn et al patent to show the invention to be obvious. Applicant respectfully points out that this characterization of the present invention is incorrect and hence the combination of references is incorrect.

The present invention receives a direct inward dial (DID) number from the telephone exchange on a trunk line. The DID number identifies the number which was dialed by the subscriber. The present invention uses the control means (a processor) to look up the DID number in a database to determine who is making the call attempt. The subscriber can call the claimed invention from any telephone, but the system will only call back to the subscribers telephone number from the database. Thus , although the claimed invention utilizes the DID number, it does not identify the originating station. It uses the DID numbers to determine the subscriber.

Applicant also respectfully points out that the DID and ANI systems are not equivalent and interchangeable. Contrary to the Examiner's assertion on page 7 of the office action, applicant's claims in this patent application are limited to DID numbers. Applicant is not claiming ANI systems and the claims do not cover the use of ANI. Applicant respectfully reserves the right to claim the use of ANI at a later time. ANI numbers do identify the caller, but DID numbers only identify the telephone number of the called number on a trunk line.

AMENDMENT AND RESPONSE

Page 9 of 9

James H. Alleman  
Serial No: 08/252,984  
Filed: June 2, 1994

---

CONCLUSION

Applicant respectfully requests that removal of all rejections of the pending claims and allowance of all claims be granted.

Respectfully submitted,

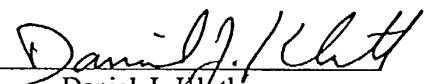
James Harry Alleman

By his attorney,

SCHWEGMAN, LUNDBERG  
& WOESSNER, P.A.  
3500 IDS Center  
80 South Eighth Street  
Minneapolis, MN 55402  
(612) 373-6904

Date Nov. 10, 1994

By

  
Daniel J. Kluth  
Reg. No. 32,146

I hereby certify that this correspondence  
is being deposited with the U.S. Postal  
Service as first class mail in an envelope  
addressed to: Commissioner of Patents and  
Trademarks, Washington, D.C. 20231 on  
November 10, 1994.

Nov. 10, 1994  
Date

  
Daniel J. Kluth

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: James H. Alleman

Examiner: A. Matar

Serial # : not available yet

Group Art Unit: 2601

Parent Serial # : 07/873,323

Filed : June 2, 1994

Docket: 162.2-US-01

Title : Interactive Telephone System for Optimizing Service Economy

---

PRELIMINARY AMENDMENT

Hon. Commissioner of Patents  
and Trademarks  
Washington, D.C. 20231

Sir:

In response to the Final Office Action mailed January 14, 1994 in the parent patent application to this application, to which the attached File Wrapper Continuation Application has been filed, and preliminary to examination, please amend the above-identified patent application as follows.

In the Drawings

Figure 3 has been changed according to the red-line drawing previously mailed on March 28, 1994.

In the Claims

Please delete claims 2-17.

Please add new claims 18-27 as follows:

PRELIMINARY AMENDMENT

Page 2 of 9

Patent Application for:

Interactive Telephone System for Optimizing Service Economy

Parent Application Serial No: 07/873,323

Filed: June 2, 1994

---

18. [New] A system for establishing a telephone communication link between a subscriber telephone station and a destination telephone station, comprising:

- control means including a caller response unit;
- storage means connected to the control means and operable for storing a local direct inward dial telephone number associated with a subscriber and for storing a subscriber remote telephone number associated with the subscriber telephone station;
- first telephone connection means connected to the control means and operable for connecting to a telephone exchange and for receiving an incoming direct inward dial telephone number from the telephone exchange as part of an incoming call attempt;
- second telephone connection means connected to the control means and operable for dialing out through the telephone exchange;
- the control means further operable for comparing the incoming direct inward dial telephone number to the local direct inward dial telephone number and, if the incoming direct inward dial telephone number matches the local direct inward dial telephone number associated with the subscriber, the control means is further operable for:
  - calling the subscriber remote telephone number through the first telephone connection means;
  - receiving from the subscriber a calling telephone number for the destination station;
  - calling the calling telephone number through the second telephone connection means; and for
  - bridging the first telephone connection means to the second telephone connection means so that the subscriber is connected to the destination.

19. [New] The system according to claim 18 wherein the control means is further operable for indicating an invalid call attempt if the incoming call attempt does not terminate within the predetermined period of time.

PRELIMINARY AMENDMENT

Page 3 of 9

Patent Application for:  
Interactive Telephone System for Optimizing Service Economy  
Parent Application Serial No: 07/873,323  
Filed: June 2, 1994

---

20. [New] The system according to claim 19 wherein the control means is further operable for answering the incoming call attempt in response to the invalid call attempt and for presenting an audio message onto the first telephone connection means in response to the invalid call attempt.

21. [New] The system according to claim 18 wherein the control means is further operable for indicating an invalid call attempt if the incoming direct inward dial telephone number does not match the local direct inward dial telephone number associated with the subscriber.

22. [New] The system according to claim 21 wherein the control means is further operable for answering the incoming call attempt and for presenting an audio message onto the first telephone connection means in response to the invalid call attempt.

23. [New] A method establishing a telephone communication link between a subscriber telephone station and a destination telephone station, comprising the steps of:

    storing a local direct inward dial telephone number associated with a subscriber;

    storing a subscriber remote telephone number associated with the subscriber telephone station;

    receiving an incoming direct inward dial telephone number from a first telephone exchange connection as part of an incoming call attempt;

    comparing the incoming direct inward dial telephone number to the local direct inward dial telephone number and if the incoming direct inward dial telephone number matches the local direct inward dial telephone number associated with the subscriber, performing the following steps:

PRELIMINARY AMENDMENT

Page 4 of 9

Patent Application for:

Interactive Telephone System for Optimizing Service Economy

Parent Application Serial No: 07/873,323

Filed: June 2, 1994

---

calling the subscriber remote telephone number;  
receiving from the subscriber a calling telephone number for the destination station;  
calling the calling telephone number through a second telephone exchange connection; and  
bridging the first telephone exchange connection to the second telephone exchange connection so that the subscriber is connected to the destination.

24. [New] The method according to claim 23 further comprising the steps of comparing the incoming direct inward dial telephone number to the local direct inward dial telephone number and if the incoming direct inward dial telephone number does not match the local direct inward dial telephone number associated with the subscriber, terminating the incoming call attempt.

25. [New] The method according to claim 23 further comprising the steps of comparing the incoming direct inward dial telephone number to the local direct inward dial telephone number and if the incoming direct inward dial telephone number does not match the local direct inward dial telephone number associated with the subscriber, answering the incoming call attempt and playing a prerecorded message.

26. [New] The method according to claim 23 further comprising the steps of timing the incoming call attempt and indicating an invalid call attempt if the incoming call attempt does not terminate within a predetermined period of time.

PRELIMINARY AMENDMENT

Page 5 of 9

Patent Application for:

Interactive Telephone System for Optimizing Service Economy

Parent Application Serial No: 07/873,323

Filed: June 2, 1994

---

27. [New] The method according to claim 26 further comprising the steps of answering the incoming call attempt and playing a prerecorded message in response to the invalid call attempt.

Remarks

In response to the Final Office Action mailed January 14, 1994 in the parent case for the present patent application, and in response to the Advisory Action mailed March 17, 1994, the above-identified patent application has been amended. Reconsideration of the rejections in the parent case and allowance of the new claims presented is respectfully solicited.

Change of Power of Attorney

Applicant calls the Examiner's attention to the Acceptance of Power of Attorney for the present patent application mailed April 7, 1994. Applicant also calls the Examiner's attention to the Change of Address request filed with the present Preliminary Amendment.

New Claims Amended claims 18 - 27

New claims 18-27 are submitted to take the place of original claims 1-17. At this time, only claims 2-17 have been deleted and claim 1 will be deleted after admission of these new claims to ensure continuity of the case.

The claims have been specifically rewritten to remove the rejections under 35 U.S.C. Section 112 and 35 U.S.C. Section 103. Support for these claims are found throughout the specification.

In particular, new claim 18 replaces original claim 1. This claim is written in a more readable fashion and explicitly sets forth the fact that direct inward dial numbers are

PRELIMINARY AMENDMENT

Page 6 of 9

Patent Application for:

Interactive Telephone System for Optimizing Service Economy

Parent Application Serial No: 07/873,323

Filed: June 2, 1994

---

used to compare an incoming call from a subscriber to the subscriber list stored within the system.

Claim 19 describes a further limitation of the system in which a user does not terminate the call within a predetermined time. This corresponds to page 17 of the specification where it describes that an invalid call attempt is one in which a caller does not hang up within a predetermined period of time. This is usually the case when a wrong number is dialed into the present system, or a user is improperly using the system. Other invalid call attempts are described in claims 20-22.

Claim 23 is a new method claim corresponding to deleted claim 14. This method claim explicitly describes the steps of operation of the present invention including the use of direct inward dial numbers which is nowhere shown in the prior art.

Claims 24-27 also describe invalid call attempts.

Interview Summary

Applicant thanks Examiner Matar for the courtesy of the telephone interview on May 16, 1994. Applicant contacted Examiner Matar to discuss the status of the claims after reviewing the Advisory Action mailed March 17, 1994. The Examiner and Applicant's attorney discussed the rejection of original claims 1, 4 and 5 under 35 U.S.C. §103 and the rejection of original claims 2 and 3 under 35 U.S.C. §112. The Examiner reiterated his position that the amendment After Final would not be admitted in its present form since the scope of independent claim 1 has changed. No agreement on the claims was made.

Drawings Objection

The Examiner objected to Figure 3 because it did not show under what condition the process would proceed from 48 to 49. A proposed drawing change was previously mailed on March 28, 1994. Acceptance of this drawing change is respectfully

PRELIMINARY AMENDMENT

Page 7 of 9

Patent Application for:

Interactive Telephone System for Optimizing Service Economy

Parent Application Serial No: 07/873,323

Filed: June 2, 1994

---

requested. Upon notice that the drawing changes are approved, new formal drawings will be submitted to the Official Draftsman.

Rejections Under 35 U.S.C. § 112, Second Paragraph

In the Final Office Action of the parent application, original claims 2-3 were rejected under 35 USC §112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention. The new claims have been carefully reviewed to ensure they comply with 35 U.S.C. § 112. Reconsideration of the rejection and allowance of new claims 18-27 is respectfully requested.

Rejection Under 35 U.S.C. § 103

In the Final Office Action of the parent application, the Examiner rejected original claims 1-14 and 16-17 under 35 USC §103 as being unpatentable over Kahn et al. (US Patent No. 4,086,438). The Examiner has not explicitly cited a second reference to support this rejection. Under MPEP 706.02(a), applicants respectfully request the Examiner cite a second reference in support of his position.

The present invention is nothing like the Kahn et al. patent. The Kahn et al. patent describes an automatic interconnection system for answering incoming calls and connecting the incoming call to an outgoing line for making an outgoing call. The calling party has to call into the system where the system answers. The calling party then provides a security code which is compared with stored codes. If a valid security code is entered by the calling party, the system will provide the calling party with a dial tone so the calling party can make an outgoing call.

In contrast to this, the present invention as described in new apparatus claims 18-22 and new method claims 23-27 describe a system which operates without the subscriber being charged for a long distance call. This is accomplished according to the claimed

PRELIMINARY AMENDMENT

Page 8 of 9

Patent Application for:

Interactive Telephone System for Optimizing Service Economy

Parent Application Serial No: 07/873,323

Filed: June 2, 1994

---

invention by having this system receive the direct inward dial number called by the subscriber and calling back the subscriber without the need to have the subscriber connect to the system. This is a superior system to the Kahn et al. patent since the subscriber will not incur any long distance charges for connection. If the assigned direct inward dial number of the subscriber matches that of the list, the system calls the subscriber's telephone station which is preassigned. Thus, the system is further superior to the Kahn et al. patent since it prevents fraud and use by non-subscribers by only calling a subscriber's telephone station. Thus, theft of a subscriber's access code or security code as described in the Kahn et al. patent is impossible with the present invention.

The new claims as submitted contain elements which are not found in the Kahn et al. reference. Thus, the rejection of the claims based on the Kahn et al. reference would not be proper. Applicant respectfully requests, therefore, that these new claims be examined, that the rejections of this case be removed, and the claims be allowed to issue.

Request for Interview Prior to First Office Action

Applicant respectfully requests a telephone interview with the Examiner prior to the first office action pursuant to MPEP Section 706.07(b) which states that "a request for an interview prior to first action on a continuing or substitute application shall ordinarily be granted." Applicant believes an interview prior to the first action would be beneficial in furthering the action on this case.

PRELIMINARY AMENDMENT

Page 9 of 9

Patent Application for:

Interactive Telephone System for Optimizing Service Economy

Parent Application Serial No: 07/873,323

Filed: June 2, 1994

---

Conclusion

Applicant respectfully requests that removal of all rejections of the pending claims and allowance of all claims be granted.

Respectfully submitted,

James Harry Alleman

By his attorney,

SCHWEGMAN, LUNDBERG  
& WOESSNER, P.A.  
3500 IDS Center  
80 South Eighth Street  
Minneapolis, MN 55402  
(612) 373-6904

By Daniel J. Kluth  
Reg. No. 32,416

Date June 2, 1994

By Daniel J. Kluth  
Daniel J. Kluth  
Reg. No. 32,416

"Express Mail" mailing label no. TB571042940

Date of Deposit: June 2, 1994  
I hereby certify that this paper or fee is being deposited with the  
United States Postal Service "Express Mail Post Office to Addressee"  
service under 37 CFR 1.10 on the date indicated above and is  
addressed to the Commissioner of Patents and Trademarks,  
Washington, D.C. 20231

DANIEL J. KLUTH  
Printed Name  
Daniel J. Kluth  
Signature

S/N 07/873,323

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: James H. Alleman

Examiner: A. Matar

Serial # : 07/873,323

Group Art Unit: 2601

Filed : April 24, 1992

Docket: 162.2-US-01

Title : Interactive Telephone System for Optimizing Service Economy

---

AMENDMENT AND RESPONSE AFTER FINAL

Hon. Commissioner of Patents  
and Trademarks  
Washington, D.C. 20231

Sir:

In response to the Final Office Action mailed January 14, 1994, please amend the above-identified patent application as follows. THIS AMENDMENT IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THE FINAL OFFICE ACTION.

In the Drawings

Figure 3 has been changed according to the red-line drawing attached to this Amendment & Response..

In the Claims

Please delete claims 5 and 13.

Please amend claims 1-4, 6-10 and 14 as follows:

AMENDMENT AND RESPONSE

Page 2 of 11

Patent Application for:

Interactive Telephone System for Optimizing Service Economy

Serial No: 07/873,323

Filed: April 24, 1992

---

1. [Twice Amended] A system at a central location for interactively establishing telephone communication links between an originating station of a subscriber [calling party] and a destination station [called party] called by said subscriber [calling party] using input and output connections to a telephone exchange [interconnecting the originating station of the calling party with the system at the central location wherein a signal containing unique identifying data uniquely identifying the originating station of the calling party is placed on the input connection whenever the calling party places a call to said input connection from said originating station], the system comprising:

storage means for storing stored data which contains an authorization list including a copy of a [the] unique identifying assigned direct inward dial number assigned to the subscriber [data of the calling party],

comparison means responsive to a received direct inward dial number received from the telephone exchange for [the signal containing the unique identifying data on said input connection in the form of input data] indicating a connection [an] attempt to establish communications from the originating station of the subscriber [calling party] through the telephone exchange and for comparing the received direct inward dialed number [input data of the signal] associated with the connection attempt with the assigned direct inward dial number [contents] of said means for storing,

origination means operable in response to a favorable comparison between said received direct inward dial number [input data] and said assigned direct inward dial number, [stored data] for originating a telephone call from said central station to said originating station of the subscriber [calling party],

connection means responsive to a dialed telephone number corresponding to the destination station [second signals] received from said originating station of the subscriber [calling party] for establishing a communication connection from said central station to [with] the destination station [called party] identified by said dialed telephone number [second signals], and

AMENDMENT AND RESPONSE

Page 3 of 11

Patent Application for:

Interactive Telephone System for Optimizing Service Economy

Serial No: 07/873,323

Filed: April 24, 1992

---

bridging means for bridging a communication connection between said originating [calling party] station and the destination station [called party].

2. [Twice Amended] A system in accordance with claim 1 which includes connection attempt terminating means connected to said comparison means and said connection means, and operable for sensing when a caller [the calling party] does not hang up after a predetermined period of time from commencement of said connection attempt [to establish communications from said originating station of the calling party], said connection attempt terminating means further operable for terminating said connection attempt by not originating a call to said originating station of the calling party in response thereto.
3. [Twice Amended] A system in accordance with claim 2 wherein said connection attempt terminating means further includes means for temporarily establishing a communication connection with said caller [originating station of the calling party] for presenting an audio message thereto, and means for disconnecting from said originating station of the calling party after completion of said audio message.
4. [Twice Amended] A system in accordance with claim 1 wherein said origination means [operable in response to a favorable comparison] includes means for answering the connection attempt and for returning an audible signal to the subscriber [calling party] indicative of said favorable comparison, whereby the subscriber [calling party] terminates the call attempt thereby [for] allowing said origination means [for originating a call] to originate a call to said originating station of the subscriber [calling party].
6. [Twice Amended] A system in accordance with claim 1 which includes means connected to said origination means [for originating a call] and to said connection means [for

AMENDMENT AND RESPONSE

Page 4 of 11

Patent Application for:

Interactive Telephone System for Optimizing Service Economy

Serial No: 07/873,323

Filed: April 24, 1992

---

establishing a communication connection] for recording information on calls and for enabling a determination of the extent of use of said system by said subscriber [calling party].

7. [Twice Amended] A system in accordance with claim 1 which includes means responsive to a failure to establish communication connection with the destination station, [of the called party to answer the call attempt] for providing an indication to the subscriber [calling party] that they can select between terminating connection attempts and attempting to establish a connection with another destination station [called party].

8. [Twice Amended] A system in accordance with claim 1 which includes means operable after establishing a communication connection with the destination [calling party] station for responding to a special signal originated from the originating station of the subscriber [calling party] so as to terminate further communications and communication attempts with said originating station of the subscriber [calling party].

9. [Twice Amended] A system in accordance with claim 8 wherein said [special signal responding] means for responding includes means for recognizing a dual tone multi-frequency signal from said originating station of the subscriber [calling party station].

10. [Twice Amended] A method for interactively controlling communication links between a subscriber [calling party] and a destination [called party] called by said subscriber [calling party] through a telephone exchange [wherein a signal containing unique identifying data uniquely identifying an originating station of the calling party is transmitted by said exchange whenever said originating station places a call into said exchange] comprising the steps of:

establishing telephone line input and output connections from a central location to said telephone exchange,

AMENDMENT AND RESPONSE

Patent Application for:

Interactive Telephone System for Optimizing Service Economy

Serial No: 07/873,323

Filed: April 24, 1992

Page 5 of 11

storing the assigned direct inward dial number assigned to a subscriber [unique identifying data of the calling party] at said central location in the form of stored data,

acquiring a connection attempt from the subscriber [originating station of the calling party] on one of said telephone line input connections,

receiving the received direct inward dial number from the connection attempt [unique identifying data within an identifying signal in the form of input data],

comparing the received direct inward dial number from the connection attempt [unique identifying data of the identifying signal associated with the connection attempt] with the assigned direct inward dial number in the form of [the] said stored data,

responding to a favorable comparison between said [input data and said stored data] received direct inward dial number and said assigned direct inward dial number and originating a call to said subscriber [calling party station] in response to said favorable comparison,

receiving the telephone number of the destination from the subscriber [signals from said originating station of the calling party] which identify a called party, [for]

establishing a communication connection with the called party identified by said telephone number [received signals], and

bridging a communication connection between said subscriber [originating station of the calling party] and said called party.

14. [Twice Amended] A method providing telephone service for use by an originator to call a called party, comprising the steps of:

providing a service center at which a call-back telephone number is provided for each originator and at which a direct inward dial number is assigned for use for all calls that are placed by that originator,

using the direct inward dial [assigned] number to call the service center whereupon the originator is identified by the service center,

AMENDMENT AND RESPONSE

Patent Application for:

Interactive Telephone System for Optimizing Service Economy

Serial No: 07/873,323

Filed: April 24, 1992

Page 6 of 11

sending a signal from the service center to the originator thus indicating that the originator is identified whereupon the originator is instructed to terminate the call,

sensing originator call [attempt] termination at the service center and responding thereto by seizing a first outbound circuit over which the service center outputs the call-back telephone number for the identified originator thereby reconnecting the service center to the originator,

prompting the originator to input the telephone number of the called party the originator intends to call,

seizing a second outbound circuit at the service center whereupon the called party number is outputted to the second outbound circuit, and

bridging the originator to the second outbound circuit thus connecting the originator with the called party.

Remarks

In response to the Final Office Action mailed January 14, 1994, the above-identified patent application has been amended. Reconsideration of the rejections and allowance of these claims is respectfully solicited.

Amended claims 1 and 10

Independent apparatus claim 1 has been amended to include the limitations of claim 5 and claim 5 is withdrawn. Claim 5 included the limitation wherein the unique identifying data is the direct inward dial number produced by the exchange.

Claim 10 has been amended to include the claims step limitation of receiving the direct inward dial number assigned to the number called as described in dependant method claim 13. Claim 13 is withdrawn.

The claims also include minor changes in wording to clarify the meaning of terms such as the substitution of the word "subscriber" for the "calling party".

AMENDMENT AND RESPONSE

Patent Application for:

Interactive Telephone System for Optimizing Service Economy

Serial No: 07/873,323

Filed: April 24, 1992

Page 7 of 11

The claims have been specifically narrowed based on claim limitations already of record in this case. No new matter is introduced thereby and no new issues are presented for examination. Reconsideration of the rejections and allowance of the claims is respectfully solicited.

Interview Summaries

Applicant contacted Examiner Matar on February 21, 1994, to request a telephone interview to be scheduled for Thursday, February 24, 1994. Applicant prepared a proposed amendment to claims 1 and 10 for consideration by Examiner Matar and faxed the claims to the Examiner on Wednesday February 23, 1994. Applicant conducted a telephonic Examiner interview on Thursday, February 24, 1994. Claims 1 and 10 were discussed. Applicants discussed how prior art related to ANI/CNI technology affects the patentable status of these claims and of dependent claim 5. No resolution was reached.

Applicant once again contacted Examiner Matar by telephone on Monday, February 28, 1994, to discuss the possibility of filing the present amendment after final rejection. The Examiner indicated that he would consider the amendment.

Drawings Objection

The Examiner objected to Figure 3 because it did not show under what condition the process would proceed from 48 to 49. A proposed drawing change is attached. Acceptance of this drawing change is respectfully requested. Upon notice that the drawing changes are approved, new formal drawings will be submitted to the Official Draftsman.

Rejections Under 35 U.S.C. § 112, Second Paragraph

Claims 2-3 were rejected under 35 USC Section 112 2nd paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention. The Examiner reiterated that claims two and three were

AMENDMENT AND RESPONSE

Page 8 of 11

Patent Application for:

Interactive Telephone System for Optimizing Service Economy

Serial No: 07/873,323

Filed: April 24, 1992

---

not understood by him. The Examiner stated "In claim 2, why would the connection attempt be terminated after a predetermined period of time?"

By way of explanation, claim 2 is drawn to the system described in detail in the specification of the preferred embodiment of the present invention. In that embodiment, a subscriber calls the central station, lets the central station ring for a predetermined number of times and then hangs up. If the subscriber does not hang up after a predetermined number of times, in other words, if the subscriber (or some other calling party) lets the direct inward dial (DID) number ring too many times, the central station of the present claimed invention assumes that it is a nonsubscriber calling this number, possibly as a wrong number. In such a condition, to prevent incorrect and bothersome long distance calls to subscribers, the central station will not attempt to call the subscriber who has subscribed to the specific DID number which was called. Thus claim 2 accurately describes this function of the preferred embodiment of the present invention.

As to claim 3, the Examiner questioned why the central location and the calling party station would be disconnected after completion of the audio message. Claim 3, like claim 2, describes an error condition in the use of the system. Either the subscriber or a caller who has the wrong number has called and incorrectly used the system. In the case where someone calls the assigned direct inward dial number and leaves the telephone ring too long or to many rings exceeding the predetermined number of rings before the hangup, the system will be in an error condition. This error condition indicates that either a caller has called the wrong number or that the subscriber is incorrectly using the system. In this alternative embodiment, after an excessive number of rings, the system will answer, however, it will play a prerecorded audio message which indicates to the caller that they have called a private subscriber system and then terminate the call by hanging up. In this fashion people calling this number in error will be informed that they indeed have reached the wrong number.

AMENDMENT AND RESPONSE

Patent Application for:

Interactive Telephone System for Optimizing Service Economy

Serial No: 07/873,323

Filed: April 24, 1992

Page 9 of 11

Rejection Under 35 U.S.C. § 103

The Examiner has rejected claims 1-14 and 16-17 under 35 USC Section 103 as being unpatentable over Kahn et al. (US Patent No. 4,086,438). The Examiner has not explicitly cited a second reference to support this rejection. The Examiner has provided, however, support for the rejection by indicating that ANI and CNI technologies existed in the prior art. It is respectfully submitted that the Examiner has not shown the motivation to combine the Kahn et al reference with the references to ANI and CNI.

Independent apparatus claim 1 and independent method claim 10 have been more specifically amended to include the limitations of claims 5 and 13 respectively. That is, the independent claims now include the specific language that direct inward dial numbers are used to link a subscriber to the central location of the present invention. The use of direct inward dial (DID) numbers in combination with the other elements of the claimed invention is nowhere taught or described in the prior art. A direct inward dial number is sent on a trunk line from a telephone company central office to a PBX interface. The trunk line carries signalling information such as the assigned DID number which has been called by the calling party. The PBX receives the DID number and passes it to the central location of the claimed invention. This DID number is then compared against the DID numbers assigned to subscribers to find the subscriber's telephone number which is requesting service.

In the interview summaries described above, the Examiner took the position that ANI and CNI appeared to make the independent claims of record obvious in combination with the Kahn et al. patent. The Examiner further posits that DID information on PBX trunk lines is equivalent to ANI and CNI and therefore equally obvious. The applicant respectfully traverses both positions as being two steps removed from a showing of obviousness.

Although the applicant has amended the independent claims of the present patent application to specifically call out DID as the means for indicating the subscriber number, applicant in no way disclaims the broader concept of using ANI and CNI in the present invention and reserves that right to reintroduce the broader claims at a later date.

AMENDMENT AND RESPONSE

Patent Application for:

Interactive Telephone System for Optimizing Service Economy

Serial No: 07/873,323

Filed: April 24, 1992

Page 10 of 11

---

Thus the narrowing of the claims in the present patent application is made without prejudice and without any admission that using ANI and CNI is obvious.

Applicant also respectfully points out the ANI and CNI information in the central office is not equivalent to DID trunk numbers. ANI or CNI indicates the telephone number of the originating station of the caller. This information is typically used in long distance toll accounting systems to indicate the telephone number of the calling party.

DID numbers on the other hand indicate which local number was called on a PBX trunk interface. Thus ANI and CNI indicate a completely different telephone number than PBX DID interface numbers. It is respectfully pointed out that the two functions of ANI/CNI and DID are not equivalent.

Applicant respectfully traverses the Examiner's position that the present invention is obvious in light of any references of record. Applicant also reserves the right to swear behind many of the references of record since the date of invention of the present invention predates many of the filing dates of the patents of record and the publication dates of publications of record. Applicant reserves the right to swear behind these references at a later time.

AMENDMENT AND RESPONSE

Patent Application for:

Interactive Telephone System for Optimizing Service Economy

Serial No: 07/873,323

Filed: April 24, 1992

Conclusion

Applicant respectfully requests that removal of all rejections of the pending claims and allowance of all claims be granted.

Respectfully submitted,

James Harry Alleman

By his attorney,

SCHWEGMAN, LUNDBERG  
& WOESSNER, P.A.

3500 IDS Center  
80 South Eighth Street  
Minneapolis, MN 55402  
(612) 373-6904

By Daniel J. Kluth  
Reg. No. 32,416

Date Mar. 14, 1994

By Daniel J. Kluth  
Daniel J. Kluth  
Reg. No. 32,416

BY FACSIMILE: The undersigned hereby certifies that this Amendment and the Transmittal Letter are being transmitted to the United States Patent and Trademark Office, by facsimile addressed to: Commissioner of Patents and Trademarks, Attn: Examiner A. Matar, Washington, D.C. 20231, on this 14th day of March, 1994.

By: Daniel J. Kluth  
Daniel J. Kluth  
Reg. No.: 32,146

**This Page is Inserted by IFW Indexing and Scanning  
Operations and is not part of the Official Record**

**BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- BLACK BORDERS**
- IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**
- FADED TEXT OR DRAWING**
- BLURRED OR ILLEGIBLE TEXT OR DRAWING**
- SKEWED/SLANTED IMAGES**
- COLOR OR BLACK AND WHITE PHOTOGRAPHS**
- GRAY SCALE DOCUMENTS**
- LINES OR MARKS ON ORIGINAL DOCUMENT**
- REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
- OTHER: \_\_\_\_\_**

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.**